UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,784	04/13/2001	Aprile L. Pilon	116142-00062	9471

31013 7590 03/04/2004

KRAMER LEVIN NAFTALIS & FRANKEL LLP
INTELLECTUAL PROPERTY DEPARTMENT
919 THIRD AVENUE
NEW YORK, NY 10022

EXAMINER	
ROMEO, DAVID S	
ART UNIT	**PAPER NUMBER**
1647	

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/835,784	PILON ET AL.	
	Examiner	Art Unit	
	David S Romeo	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-184* is/are pending in the application.

4a) Of the above claim(s) *See Continuation Sheet* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *See Continuation Sheet* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 1-5,8-12,15-22,25-30,33-41,44-50,53-59,62-69,71-77,80-88,91-97,100-106,109-115,118-122,125,128,131,134,137 and 140-184.

Continuation of Disposition of Claims: Claims rejected are 6,7,13,14,23,24,31,32,42,43,51,52,60,61,69,70,78,79,89,90,98,99,107,108,116,117,123,124,126,127,129,130,132,133,135,136,138 and 139.

DETAILED ACTION

Claims 1-184 are pending.

Applicant's election with traverse of group II in the paper filed 11/06/2003 is acknowledged. The traversal is on the ground(s) that a search of the prior art when examining group II should reveal any prior art for the remaining claims, that if the search of an entire application can be made without serious burden the Examiner must examine it on the merits even if it includes claims to independent or distinct inventions, that a search of the subject matter of each group would not be a serious burden on the Examiner, that the Examiner must also show serious burden by appropriate explanation, that Groups I and III-X are all in the same class and subclass and thus searches within this subject matter would not impose an undue burden on the examiner, that the delay in the examination of the non-elected claims will likely result in the patent term for these claims being unnecessarily shortened, that it is likely that the same Examiner would be in charge of the divisional application; but the Examiner will have to conduct a duplicate, redundant search at the time he examines the Examiner is assigned to the divisional application since that divisional application will be examined at a much later date, that, alternatively, if a different Examiner is assigned to the divisional application, a significant loss of PTO efficiency would be incurred as a result of the examination of that divisional case. This is not found persuasive because a search for a composition is not limited by its intended use and encompasses searches in areas that are not co-extensive with Applicant's intended use. Therefore, a search of the prior art when examining group II would not necessarily reveal any prior art for the remaining claims. Furthermore, a

search is directed to references which would render the invention obvious, as well as references directed to anticipation of the invention, and therefore requires a search of relevant literature in many different areas of subject matter. Separate classification (i.e., class and subclass) of distinct inventions is sufficient to establish a prima facie case that the search and examination of the plural inventions imposes a serious burden upon the Examiner. See M.P.E.P. § 803. Such separate classification is set forth in the Office action mailed 10/02/2003. Applicant has offered no evidence to rebut this showing. Regarding the patent term for these non-elected claims being unnecessarily shortened, this issue does not appear to be germane to a restriction under 35 U.S.C. 121. Regarding the conduct of a duplicate, redundant search, as indicated previously, a search for a composition is not limited by its intended use and encompasses searches in areas that are not co-extensive with Applicant's intended use. Therefore, a search of the prior art when examining group II would not necessarily reveal any prior art for the remaining claims, and, therefore, would not necessarily be redundant.

The requirement is still deemed proper and is therefore made FINAL.

Claims 1-5, 8-12, 15-22, 25-30, 33-41, 44-50, 53-59, 62-69, 71-77, 80-88, 91-97, 100-106, 109-115, 118-122, 125, 128, 131, 134, 137, 140-184 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the paper filed 11/06/2003. The metes and bounds of the restriction are clear. If the examiner has inadvertently left out, through a typographical error or otherwise, the number or numbers of a claim or claims that should

have been indicated as withdrawn, above, then that claim or those claims is or are withdrawn, as above, commensurate with the restriction requirement mailed 10/02/2003 and with Applicant's election of group II in the paper filed 11/06/2003.

Claims 6-7, 13-14, 23-24, 31-32, 42-43, 51-52, 60-61, 69-70, 78-79, 89-90, 98-99, 107-108, 116-117, 123-124, 126-127, 129-130, 132-133, 135-136, and 138-139 are being examined.

Specification

The application is not fully in compliance with the sequence rules, 37 C.F.R. § 1.821-1.825. Specifically, the specification fails to recite the appropriate sequence identifiers at each place where a sequence is discussed. See the paragraph bridging pages 68-69. This is not meant to be an exhaustive list of places where the specification fails to comply with the sequence rules. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. The application cannot issue until it is in compliance. Nucleic acid sequences with 10 or more nucleotides, at least 4 of which are specifically defined, must comply with the sequence rules. Amino acid sequences with 4 or more residues, at least 4 of which are specifically defined, must comply with the sequence rules. Sequence identifiers can also be used to discuss and/or claim parts or fragments of a properly presented sequence. For example, language such as "residues 14 to 243 of SEQ ID

NO:23" is permissible and the fragment need not be separately presented in the "Sequence Listing."

Correction is required.

Priority

Under 35 U.S.C. 120, the claims in a U.S. application are entitled to the benefit of the filing date of an earlier filed U.S. application if the subject matter of the claim is disclosed in the manner provided by 35 U.S.C. 112, first paragraph in the earlier filed application. See, e.g., Tronzo v. Biomet, Inc., 156 F.3d 1154, 47 USPQ2d 1829 (Fed. Cir. 1998); In re Scheiber, 587 F.2d 59, 199 USPQ 782 (CCPA 1978).

After inspecting the earlier filed U.S. applications, the examiner concludes that the subject matter claimed in this application is not supported by any of the earlier filed U.S. applications because the claims, as whole, raise the issue of new matter with respect to the earlier filed U.S. applications. Hence, the claimed subject matter is not disclosed in the manner provided by 35 U.S.C. 112, first paragraph in the earlier filed applications. Accordingly, the claimed subject matter defined in claims 6-7, 13-14, 23-24, 31-32, 42-43, 51-52, 60-61, 69-70, 78-79, 89-90, 98-99, 107-108, 116-117, 123-124, 126-127, 129-130, 132-133, 135-136, and 138-139 has an effective filing date of 04/13/2001, the filing date of the present application. Should applicant disagree, it is incumbent upon the applicant to provide the serial number and specific page number(s) of any parent application filed prior to 04/13/2001 which specifically supports the particular claim limitation for each and every claim limitation in all the pending claims which applicant considers to have been in possession of prior to 04/13/2001.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6, 7, 13, 14, 23, 24, 31, 32, 42, 43, 51, 52, 60, 61, 69, 70, 78, 79, 89, 90, 98, 99, 107, 108, 116, 117, 123, 124, 126, 127, 129, 130, 132, 133, 135, 136, 138, 139 rejected under 35 U.S.C. 102(a or b) as being anticipated by Zhang (U), as evidenced by Pilon (V) and Cummins (A).

This rejection is being made in the alternative under 35 U.S.C. 102(a or b) in the event that Applicants provide the serial number and specific page number(s) of any parent application filed prior to 04/13/2001 which specifically supports the particular claim limitation for each and every claim limitation in all the pending claims which applicant considers to have been in possession of prior to 04/13/2001.

Zhang (U) discloses a mixture of 500 µg of hFn with an equimolar concentration of UG in 150 µl of PBS. The mixture was injected into mice weighing ~ 22g. Page

1412, left column, item #26. UG protected the renal glomeruli from Fn accumulation (page 1411, paragraph bridging left and middle columns).

Pilon (V) discloses that Zhang (U) showed that recombinant human CC10 could prevent the renal deposition of human fibronectin injected into the CC10/UG knockout mouse (paragraph bridging pages 290-291). Accordingly, the UG disclosed by Zhang (U) was "recombinant human uteroglobin."

PBS is a "pharmaceutically acceptable carrier or diluent," as evidenced by Cummins (column 12, full paragraph 2).

The metes and bounds of the concentration ranges recited in the dependent claims are not clearly set forth. Zhang's (U) mixture of 500 μg of hFn with an equimolar concentration of UG in 150 μl of PBS comprises UG within the recited ranges, in the absence of evidence to the contrary. Assuming a MW or 550,000 for Fn and a MW of 10,000 for UG, the amount of UG injected into mice weighing ~ 22g was within the recited ranges. Accordingly, the amount of UG was "sufficient" to achieve the intended effects.

There is no evidence of record that the concentration of Fn in Zhang's (U) mixture of 500 μg of hFn with an equimolar concentration of UG in 150 μl of PBS, is excluded from the present claims. Accordingly, the amount of Fn was "sufficient" to achieve the intended effects, in the absence of evidence to the contrary.

Claims 6, 7, 13, 14, 23, 24, 31, 32, 42, 43, 51, 52, 69, 70, 78, 79, 89, 90, 98, 99, 107, 108, 116, 117, 123, 124, 126, 127, 135, 136 are rejected under 35 U.S.C. 102(e) as being anticipated by Patierno (B).

Patierno discloses recombinant human uteroglobin (column 7, full paragraph 2) and compositions comprising same with a pharmaceutically acceptable carrier or diluent (column 8, penultimate full paragraph). The metes and bounds of the concentration ranges recited in the dependent claims are not clearly set forth. Patierno's compositions comprising UG comprises UG within the recited ranges, in the absence of evidence to the contrary. It is noted that Patierno discloses that typical therapeutic doses will be about 0.1 to 1.0 mg/kg of body weight of pure uteroglobin (column 10, last full paragraph), which is within the recited ranges. Accordingly, the amount of UG is "sufficient" to achieve the intended effects.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 129, 130, 132, 133, 138, 139 rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang (U), as evidenced by Pilon (V) and Cummins (A).

Zhang (U) discloses a mixture of 500 μg of hFn with an equimolar concentration of UG in 150 μl of PBS. The mixture was injected into mice weighing ~ 22g. Page 1412, left column, item #26. UG protected the renal glomeruli from Fn accumulation (page 1411, paragraph bridging left and middle columns).

Pilon (V) discloses that Zhang (U) showed that recombinant human CC10 could prevent the renal deposition of human fibronectin injected into the CC10/UG knockout

mouse (paragraph bridging pages 290-291). Accordingly, the UG disclosed by Zhang (U) was "recombinant human uteroglobin."

PBS is a "pharmaceutically acceptable carrier or diluent," as evidenced by Cummins (column 12, full paragraph 2).

The metes and bounds of the concentration ranges recited in the dependent claims are not clearly set forth. Zhang's (U) mixture of 500 µg of hFn with an equimolar concentration of UG in 150 µl of PBS comprises UG within the recited ranges, in the absence of evidence to the contrary. Assuming a MW or 550,000 for Fn and a MW of 10,000 for UG, the amount of UG injected into mice weighing ~ 22g was within the recited ranges. Accordingly, the amount of UG was "sufficient" to achieve the intended effects.

There is no evidence of record that the concentration of Fn in Zhang's (U) mixture of 500 µg of hFn with an equimolar concentration of UG in 150 µl of PBS, is excluded from the present claims. Accordingly, the amount of Fn was "sufficient" to achieve the intended effects, in the absence of evidence to the contrary.

Zhang also discloses that the molecular mechanism that normally prevents Fn deposition appears to involve high-affinity binding of UG with Fn to form Fn-UG heteromers that counteract Fn self-aggregation, which is required for abnormal tissue deposition (Abstract).

Zhang (U), as evidenced by Pilon (V) and Cummins (A), does not disclose a mixture of a hFn fragment with an equimolar concentration of UG in PBS.

However, it would have been obvious to one of ordinary skill in the art at the time of Applicants' invention to make a mixture of 500 µg of hFn with an equimolar

concentration of UG in 150 µl of PBS, as taught by Zhang, and to modify that teaching by substituting a fragment derived from hFn, with a reasonable expectation of success. One of ordinary skill in the art would be motivated to make this modification in order to determine sites in hFn involved in high-affinity binding of UG with Fn to form Fn-UG heteromers that counteract Fn self-aggregation that normally prevent Fn deposition. The invention is prima facie obvious over the prior art.

Claim Rejections - 35 USC § 112

Claims 135-136 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "in an amount sufficient to extracellular matrix invasion" doesn't make any sense. The metes and bounds are not clearly set forth.

Claims 7, 14, 24, 32, 43, 52, 61, 70, 79, 90, 99, 108, 117, 124, 127, 130, 133, 136, 139 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear what object possesses the property of "kg" such that the amount of UG in the composition could be ascertained The metes and bounds are not clearly set forth.

Claims 129, 130, 132, 133, 138, 139 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the

subject matter which applicant regards as the invention. Claims 129, 130, 132, 133, 138, 139 are indefinite over the recitation of "derived from" because the nature and extent of the derivation are unclear. The metes and bounds are not clearly set forth.

Claims 6-7, 13-14, 23-24, 31-32, 42-43, 51-52, 60-61, 69-70, 78-79, 89-90, 98-99, 107-108, 116-117, 123-124, 126-127, 129-130, 132-133, 135-136, and 138-139 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite the term "recombinant human uteroglobin." The specification defines the recombinant form of uteroglobin as preferably having substantially the same amino acid sequence as that of the native human uteroglobin protein. The specification defines an amino acid sequence having "substantially the same" amino acid sequence as that of the native human protein as including recombinant human uteroglobin having at least 75% identity to the native human protein. Page 17, full paragraph 1. Because the instant specification does not identify that material element or combination of elements which is unique to, and, therefore, definitive of "recombinant human uteroglobin" an artisan cannot determine what additional or material limitations are placed upon a claim by the presence of this element. The metes and bounds are not clearly set forth.

Conclusion

No claims are allowable.

ANY INQUIRY CONCERNING THIS COMMUNICATION OR EARLIER COMMUNICATIONS FROM THE EXAMINER SHOULD BE DIRECTED TO DAVID S. ROMEO WHOSE TELEPHONE NUMBER IS (571) 272-0890. THE EXAMINER CAN NORMALLY BE REACHED ON

MONDAY THROUGH FRIDAY FROM 7:30 A.M. TO 4:00 P.M. IF ATTEMPTS TO REACH THE EXAMINER BY TELEPHONE ARE UNSUCCESSFUL, THE EXAMINER'S SUPERVISOR, GARY KUNZ, CAN BE REACHED ON (571) 272-0887.

IF SUBMITTING OFFICIAL CORRESPONDENCE BY FAX, APPLICANTS ARE ENCOURAGED TO SUBMIT OFFICIAL CORRESPONDENCE TO THE FOLLOWING TC 1600 BEFORE AND AFTER FINAL RIGHTFAX NUMBERS:

BEFORE FINAL (703) 872-9306
AFTER FINAL (703) 872-9307

CUSTOMERS ARE ALSO ADVISED TO USE CERTIFICATE OF FACSIMILE PROCEDURES WHEN SUBMITTING A REPLY TO A NON-FINAL OR FINAL OFFICE ACTION BY FACSIMILE (SEE 37 CFR 1.6 AND 1.8).

FAXED DRAFT OR INFORMAL COMMUNICATIONS SHOULD BE DIRECTED TO THE EXAMINER AT (571) 273-0890.

ANY INQUIRY OF A GENERAL NATURE OR RELATING TO THE STATUS OF THIS APPLICATION OR PROCEEDING SHOULD BE DIRECTED TO THE GROUP RECEPTIONIST WHOSE TELEPHONE NUMBER IS (703) 308-0196.

David Romeo

DAVID ROMEO
PRIMARY EXAMINER
ART UNIT 1647

DSR
MARCH 2, 2004